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ALBERTA NATURALIST

VOLUME 4 NUMBER 1

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Wide-scale distribution of this issue of the Alberta Naturalist was made possible through a much-appreciated grant from the Provincial Government which is being used to promote the Federation of Alberta Naturalists and formation of a new club in Medicine Hat.

Cover: "Harlequin Ducks" by Peter Karsten

A familiar figure to Alberta naturalists, Calgary artist Peter Karsten has exhibited work in all of the Canadian Nature Art Shows to date. His work is sold through the Gainsborough and Canadian Art Galleries in Calgary.

ALBERTA CHRISTMAS BIRD COUNTS, 1973

This year, six Christmas Bird Counts were conducted in Alberta. A total of 19,686 of 59 species were counted by 105 participants. Following is a summary.

CALGARY. December 30; 490 miles by car, 47 miles on foot, 37 hours by car, 41 hours on foot; Cloudy, 15°-9°, wind north at 20 MPH down to 10 MPH; 1" snow cover. 44 species, 10,272 individuals.

Participants: Stuart Alexander, Desmond Allen, Peter Allen, Winnie Amos, John Atkinson, Charles Bird, Hattie Boothman, Peter Bricknell, Miles Brook, Earl Brown, Edith Brown, Rudi Butot, Anna Cairns, Francis Cunningham, Sandy Denton, Rein DeWit, Willis Hall, Ian Halladay (compiler), Ruth Jones, Peter Karsten, Brian Keating, Diane Keats, Barbara Koncohrada, Bill Lang, Virginia Lang, Eric Lawrence, Sue Lawrence, Anna Mazurek, Garry McKay, Nannette McKay, Bill McKay, Scott O'Keeffe, Gloria Oughton, Trace Oughton, Brian Perkins, John Price, Barry Poag, Donna Poag, Carol Robinson, Peter Sherrington, and Hank VanderPol.

COLD LAKE. December 15; 70 miles by car; -10°, overcast, light breeze. 9 species, 153 individuals. (Add: Hairy Woodpecker, 3, Dec. 16; Gray Jay, 1, Dec. 16; and Snowy Owl, 1, Jan. 3.) - William Haras. (compiler).

EDMONTON. Dec. 16; 4° to 15°, wind NW 5 MPH to SW 2 MPH; 13-14" complete snow cover; 15-mile radius from SW corner of the University of Alberta farm. 42 species, about 7002 individuals. (Add: Saw-whet Owl and Song Sparrow.)

Participants: John Alway, Kay Ball, Tom Barry, Bruce Bembridge, Gail Bembridge, Jerry Beyersbergen Jr., Randy Chappel, Peter Demulder, Bob Fisher, Loran Goulden, Graem Greenlee, Pat Greenlee, Reg Heath,

ALBERTA CHRISTMAS BIRD COUNTS, 1973

SPECIES	CALGARY	COLD LAKE	EDMONTON	JASPER	RED DEER	STETTTLER
Canada Goose			1			
Mallard	2500	100+	337	6		11
Pintail				1		
Amer. Green-winged Teal	4					
Blue-winged Teal	1					
Lesser Scaup	9		1			
Common Goldeneye	250		50			6
Bufflehead	1		2			
Oldsquaw	1					
Common Merganser	12		2			
Goshawk	3					
Rough-legged Hawk	2					
Bald Eagle	6	1				
Gyr Falcon			1			
Prairie Falcon	3					
Peregrine Falcon	1					
Merlin	5		1			
Ruffed Grouse	1	3	2		1	3
Sharp-tailed Grouse			2			
Ring-necked Pheasant	14		4			2
Gray Partridge	223		75			16
Rock Dove	NC		177	5	96	16
Great Horned Owl	5		5			5
Snowy Owl	15		10			
Short-eared Owl			1			
Common Flicker	1		2			
Pileated Woodpecker			3		1	
Hairy Woodpecker	2		18		3	4
Downy Woodpecker	18		27		8	10
North. 3-Toed Woodnecker	3		6			
Gray Jay				3		
Blue Jay	1		78		10	13
Black-billed Magpie	539	3	285	1	33	18
Common Raven	2	8		10		
Common Crow	3					
Clark's Nutcracker				2		
Black-capped Chickadee	224	1	409		77	72
Mountain Chickadee	3					
Boreal Chickadee	10		25		2	12
Wht.-breasted Nuthatch	4		9		4	
Brown Creeper	1		6			
American Dipper				1	5	
American Robin	6		1			
Golden-crowned Kinglet	6		1			
Bohemian Waxwing	3059		4000		1231	30
Cedar Waxwing			1			
Northern Shrike	3		1			
Common Starling	298		14	5		
House Sparrow	2068		544	60	97	102
Rusty Blackbird	8					
Evening Grosbeak	107		346	2	103	
Pine Grosbeak	165	6	208		22	5
Hoary Redpoll	2		4			
Common Redpoll	395	16	292		106	40
Red Crossbill			8			
White-winged Crossbill			12			
Dark-eyed Junco			4		3	
White-throated Sparrow			2			
Snow Bunting	288	15			8	12
TOTAL # INDIVIDUALS	10273	153	6977	94	1812	377
TOTAL # SPECIES	44	9	42	11	18	18

Miles Hennie, Betty Horton, Harry Horton, Stefan Jungkind, Robert Lister, Lyman Matthews, Martin McNicholl, Jack Park, Barb Robinson, Don Robinson, Dave Spalding, Duane Sept, Phil Taylor, Charles Tebby, Terry Thormin, Bob Turner (compiler, Edmonton Bird Club), Chris Thompson, Peter Thompson, Helge Welling, Muriel Welling, Jill Williams, Allen Wisely, and Jim Wolford.

JASPER. Dec. 21; 1 mile on foot, in one hour and 25 miles by car in four hours; 25°, wind nil, cloud cover 90%; snow cover 12" on the level; Jasper townsite to Jasper Lake. 11 species, 98 individuals. Alan R. Smith (compiler).

RED DEER. Dec. 26; calm, above 0°. 18 species, 1810 individuals. (Add: Bald Eagle, 1, and Mallard, 2.)

Participants: Dorothy Broadbent, Margaret Glabais, Helen Harris, Bob Johnson, Eldon Neufeld, Jennifer O'Brien, Michael O'Brien, Maxine O'Riordan, Larry Olnyck, Mary Ellen Olnyck, Beth Peck, and Bryan Shantz.

STETTLER. Dec. 26; 125 miles by motor vehicles, 6 party hours including one hour on snowshoes; 12°-20°, heavy overcast with a few snowflakes, calm; 12-18" snow cover; Stettler and area to Big Knife Provincial Park and the Forestburg Dam on the Battle River. 18 species, 377 individuals. (Add: Robin, 1, Dec. 21; Goshawk, 1, Dec. 28; Starling, 20, Dec. 28; and Snowy Owl, 1, Dec. 29.)

Participants: Mrs. Cruickshank, Emil Dannewald, David Dowie, Francis Dowie, Rosemary Dowie, Lloyd Greenlee, Leona Jones, Agnes Klaus, Martha Kruger, Ron Kruger, Laverne Lohr, Lloyd Lohr (compiler, Buffalo Lake Naturalists' Club), Erick Smith and Don Strandquist.

TEACHER'S CORNER: TURN ON TO SOUND

by Bill Lang

Motivation is a key concept in education. Young and old come to natural history education with a host of motivations associated with the outdoors generally. Natural History must compete. One of the major stumbling blocks to a greater involvement with nature comes with nothing more than the setting of the sun: North Americans are afraid of the dark. Introduction to the sounds of nature can be a great motivator; more experience can provide a security blanket.

Leaders of natural history field trips for novices soon learn to emphasize relationships rather than identification. Looking through your eyes, the students may get turned on by the new

relationships they see. However, how you learn is often as important as what you learn. Seeing provides no kick in itself: our culture is visually oriented. Next spring, find a quiet meadow, sit your class down for an hour or so in silence and identify the songs and tiny rustles. You will be pleasantly surprised. Like discovering a new sense, discovery through sound has a kick.

In our well-lit world even the back-packer carries a flashlight. While much can be done to develop our night vision, too little importance is placed on hearing. Have your students listen to the sounds that they make, sit with eyes closed in the woods or imagine the sounds various animals would make. With experience everyone can learn to identify not only what is making the sound but, in some cases, even its intentions. To twist an old phrase, knowledge is security.

ALBERTA NATURALISTS (11): CLARENCE SCHRAM JUNG (b.c. 1900)

by D.A.E. Spalding

Clarence Jung made one contribution to Alberta ornithology, in a paper on birds of the Peace-Athabasca delta. The trip was made in 1928, with Jos. Simons, to film bird life for the Milwaukee Public Museum. Attention was perhaps directed to this area by Preble's major study, published in 1908, which is mentioned in the text, although there is also a reference to the 'myriad geese' about which 'we had been told', suggesting a more personal stimulus.

The travellers left Edmonton on June 5th, by rail to Waterways. After a delay of several days, a steamer took them to Fort Chipewyan, after which they explored west across Lake Claire, up the Birch River for twenty miles and back to the Quatre Fourches Channel. Another side trip led down the Slave River to see the famous Pelican colony near Fort Smith. The return journey began on June 28th.

Their observations of 104 species of birds were reported in Auk two years later. Two species, Franklin's Gull and Mourning Dove, are reported for the first time, as they are not mentioned by Preble. The gull breeds in the area (as discovered later by Soper) but was perhaps confused with the Bonaparte's Gull by Preble's party. The Mourning Dove is much rarer in the area, and seems to have been only noted three times subsequently (two Alberta and one NWT records are reported by Kuyt).

Useful information about other species includes notes on breeding, behaviour, nesting and distribution (localities are sometimes rather vaguely described). Most observations relate to the delta and adjacent areas, but others were made along the Athabasca River (including

reported breeding of Rough-legged Hawks not referred to in Salt and Wilk) and around McMurray and Waterways. Those familiar with the latter area today will be amused to note Clay-colored Sparrows 'directly across the street from the row of buildings that constitute the main street of McMurray'.

Banding of young snipe is noted, and three Mew Gulls were collected and placed in the Milwaukee Public Museum; an attempt to collect the Mourning Dove failed. Photography of young Canvasbacks and Green-winged Teal and adult Lesser Yellowlegs was noted, but it is not known what else was filmed. There is also a reference to field notes. Attempts are being made to locate these original sources and, if possible, secure copies or further information.

Clarence Jung was from Czechoslovakian stock, and has lived for most of his life in the Milwaukee area. He has published a number of papers on the birds of that area, as well as more popular articles in 'Lore', the magazine of the Milwaukee Public Museum, with which he has been long associated.

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- Soper, J.D. 1942. The bird of Wood Buffalo Park and vicinity, Northern Alberta and district of Mackenzie, N.W.T., Canada. Transactions of the Royal Canadian Institute. 24: 19-97.

OVERHEAD (36)

"A knowledgeable admirer of a wild orchid is less of a threat to its survival (unless he is a botanist) than a visitor unaware of the rarity of certain plants."

From: Bouchard, A. 1973. Carrying capacity as a management tool for national parks. Park News. 9(3): 40-52.

Submitted by Martin McNicholl

RECENT PUBLICATIONS ON THE NATURAL HISTORY OF ALBERTA (7)

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- Sweet, A.R. and A. Chandrasekharam. 1973. Vegetative Remains of Azolla schopfi Dijkstra from Genesee, Alberta. Canadian Journal of Botany. 51(8): 1491.
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1973 FLOWERING DATES

by C.D. Bird

There was a gratifying response on the part of many individuals to the Federation of Alberta Naturalists' project involving the gathering of phenological data in the form of the dates of blooming of Alberta flowering plants. This response was good during the spring but later on tapered off so that only a few individuals provided substantial summer and fall information. This parallels the seasonal drop off that occurs in bird observations as species numbers increase, holidays come along, and interest wanes somewhat after the glories of seeing the spring reappearance of so many old friends.

It has been decided to somewhat simplify and abbreviate the project in order to (1) partially counteract the above trend by reducing the man-hours involved, (2) avoid problems with determining difficult species, and (3) get around a shortage of publication space. In 1974, and in succeeding years, observations will be solicited on those species contained in the selected list of 100 key species for which the 1973 observations are reported in this article. Four principles were involved in the formulation of this master list: (1) introduced weeds were avoided, (2) species were chosen to reflect all parts of the growing season, (3) all species had to be relatively easy to identify, and (4) some southern and northern specialties had to be included. Observations in the future will, of course, still be welcomed for other species, and will be retained in the data files, but season summaries will be only of those species in the master list.

The accompanying Table includes data from seventeen different areas in the province. These have been arranged from south to north and, in those cases of similar latitude, from lower elevations to higher elevations. Each area is a reasonably distinct geographical entity encompassing a central point and a region of varying size surrounding that point. The areas, with the included nearby places indicated, are (1) Writing-on-Stone Provincial Park; (2) Lethbridge - Chin, Raymond; (3) Medicine Hat; (4) Mountain View - Beazer, Carway; (5) Elkwater, (6) Lundbreck - Beaver Mines, Bellevue, Burmis, Coleman, Pincher Creek; (7) the south end of the Porcupine Hills; (8) Stavely - Cayley; (9) Carseland - Strathmore; (10) Drumheller - Beynon, Gem, Hussar, Morin, Rockyford, Rosebud, Rosedale, Standard; (11) Calgary - Cochrane, De Winton; (12) Longview - to 22 miles up the Highway Road; (13) Seebe - Canmore, Exshaw; (14) Red Deer - Del-

	Writing-on-Stone Prov. park	Lethbridge Area	Medecine Hat	Mountain View Area	Elkwater	Lundbreck Area	South end of Porcupine Hills
Elevation	3100'	3050'	2200'	4400'	4100'	4200'	4300'
<i>Achillea millefolium</i> ssp. <i>lanulosa</i>		My30-Jy2		Jn17			
<i>Agoseris glauca</i>		Jn21		Jn5			
<i>Allium textile</i>		My20	My23				
<i>Amelanchier alnifolia</i>		My10-20				My19-26	
<i>Androsace septentrionalis</i>				My11		My19	Jy8
<i>Anemone canadensis</i>							
<i>A. multifida</i>		My20-Jn21		Jn17			My19-26
<i>A. patens</i> var. <i>wolfgangiana</i>	Ap5	Mr24-My12		My11	Ap26-Jn12	Ap4-My19	
<i>Aralia nudicaulis</i>							
<i>Arctostaphylos uva-ursi</i>						My19	My12-13
<i>Astragalus agrestis</i>				Jn17			
<i>A. crassicaulus</i>				Jn5	Jn12		
<i>Balsamorhiza sagittata</i>				Jn5		My12-21	
<i>Caltha palustris</i>							
<i>Calypso bulbosa</i>					My29-Jn11	My19-Jn3	
<i>Campanula rotundifolia</i>		Jn21-Jy2					
<i>Castilleja miniata</i>						Jn10	
<i>C. septentrionalis</i>				Jn17			
<i>Cerastium arvense</i>		My10-20				My19	My13
<i>Chrysopsis villosa</i>		Jn20-Jy2				Jn20	
<i>Clematis verticellaris</i> var. <i>columbiana</i>					My27-Jn5		My19-Jn3
<i>Comandra pallida</i>		My20-21					
<i>Cornus canadensis</i>							Jy8
<i>Corydalis aurea</i>						My19	
<i>Delphinium bicolor</i>	Ap4				My27	My19-21	My13-20
<i>Disporum trachycarpum</i>						My19	
<i>Elaeagnus commutata</i>		My20-30				My29	
<i>Epilobium angustifolium</i>							Jy8
<i>Erigeron flavus</i>		Jn8-Jy2					
<i>Erysimum inconspicuum</i>		My20		Jn17			
<i>Fragaria virginiana</i> var. <i>glaucophylla</i>					My27-Jn5	My28	
<i>Fritillaria pudica</i>	Mr31-Ap4	Ap10-20		My11		Ap10-My30	
<i>Gaillardia aristata</i>		Jn8-Jy2				Jn17	
<i>Galium boreale</i>						Jn20	
<i>Geranium viscosissimum</i>				Jn5-17	Jn5	Jn3	
<i>Geum triflorum</i>		Ap20-My20		Jn5	Jn5-12	My2-19	
<i>Grindelia squarrosa</i>							
<i>Hedysarum alpinum</i>							
<i>H. mackenzii</i>						Jn17	
<i>Heracleum lanatum</i>							
<i>Heuchera richardsonii</i>				Jn17			
<i>Lathyrus ochroleucus</i>							
<i>Lesquerella arenosa</i>		My3-10					
<i>Liatris punctata</i>		Jy29					
<i>Lilium philadelphicum</i> var. <i>andinum</i>						Jn19	

Stavely Area	Carseland Area	Drumheller Area	Calgary Area	Longview Area	Seebe Area	Red Deer Area	Camrose Area	Edmonton Area	Glenevis Area
3500'	3100'	2300'	3500'	4500'	4200'	2800'	2400'	2200'	2200'
Jy6-Au9		Jn14	Jn4-Jy8					Jn18-26	
Jy6	Jn3 My27-Jn3 Jn3	My20-Jn3 My12-14 My5-13	Jn17-Jy4 My15-Jn20 My7-Jy27 Ap24-Jn22	Jn16 Jn9-16 Jn9-16 Jn9-16	Jn13-17 My27 My27-Jn17	My27 My18-27 My14-27	My27 My13-16	My19	My19 My16
My1									
Jy6 My4-11	Jn3	Jn16 Ap1-My12 My5-21	My12-Jy4 My13-Jy19 Mr16-Se29 Jn9 Ap20-Jy4	Jn9-16 Jn9-16 Jn9-16	My21-27 Ap10-My27 My14-21	Jy20 Ap9 Jn1 My16	Jn10 Ap17-My13 My27	Jn13-19 My26	My6 My21-Jn9 Ap24
	Jn3	My15-Jn3	My26-Jy4 My14-Jn2 My21-Jn17	Jn9 Jn9-16	My27 Jn8	My27 My19-20	My21	Jn13 My17-21	
Jy6-Au9		Jy6	Jy23-Se30 Jn10 My31-Jy27 My13-Jy4 Jy11-Oc25	Jn9-Jy1 Jn9-16 Jn9-16	Jn4-17 My16-21	Jy10 Jy10 My27-Jn1	My20	Jn22	Jn17 My22 Jy29
Jy6		My12-20							
Au9									
		My19 My20 My20	My13-Jy4 My22-Jn10 Jn17 My13-Jn6	Jn9-16 Jn9-16 Jn9-16 Jn9-16	My25 My21 My18-Jn17	My25-Jn4 Jn4 My27-Jn2	My27 My13	My18 My27-Jn19 My10	My18-Jn4 My22 My29 My15
	Jn3 Jn3	My13-21	My7-Jy27 My18-Jy4 Jy3-Se3 Jn7-21 My27-Jy3	Jn9 Jn9-16 Jn9-16		My16-Jn4 Jn18 Jy11 My27		My17-25 Jy1	My19
		My12-21	My3-Se29	Jn9-16	My21-27	My27-Jn5	My20	My14-19	My14-15
Jy6 Jy6 Jy6-Au9		Jy6 Jn18	Jn20-Se6 Jn7-Jy27 Jn2-Oc2	Jn9-16 Jn9-16	Jn15-26	Jy10		Jn16	Jn12
My1-Jy6		My5-21 Au10 My30-Jy27	My8-Jy4 Jn27-Jy19 Jn9-16 My13-Jn10 Jn18-Jy27	Jn9-16	My9-Jn17 My21 Jn17	My25 Jy11	My21-27	Jn23	
Jy6 Jy6 My1 Au9 Jy6	My27-Jn3	Jn30 My5-12 Au10 Jy5	Jn7-21 Jn3-Jy4 My2-Jn10 Jy21-Au8 Jn24-Jy10	Jn9-16 Jn16	Jn25-26	Jn28	Jn3	Jn22	My29 Jn13-19

	Writing-on- Stone Prov. Park	Lethbridge Area	Medecine Hat	Mountain View Area	Elkwater	Lundbreck Area	South end of Porcupine Hills
Elevation	3100'	3050'	2200'	4400'	4100'	4200'	4300'
<i>Linaria vulgaris</i>							
<i>Linnaea borealis</i>							Jy8
<i>Linum lewisii</i>		My20-30				My20-Jn2	
<i>Lithospermum incisum</i>							
<i>L. ruderale</i>		My27		Jn5		My26	
<i>Lonicera dioica</i> var.							
<i>glaucescens</i>							
<i>L. involucrata</i>							
<i>Lupinus argenteus</i>			My13	Jn17	Jn11	Jn12	My12
<i>Maianthemum canadense</i>							
<i>Mentha arvensis</i> var. <i>villosa</i>							
<i>Monarda fistulosa</i> var.							
<i>menthaefolia</i>							Jy8
<i>Oenothera biennis</i>							Jy8
<i>Opuntia polyacantha</i>		Jn21-Jy2					
<i>Orchis rotundifolia</i>							
<i>Orthocarpus luteus</i>							
<i>Oxytropis sericea</i> var.		My10-20	My13	Jn17		My19-Jn17	
<i>spicata</i>							
<i>O. splendens</i>							
<i>Pedicularis groenlandica</i>				Jn17			
<i>Penstemon nitidus</i>		My20	My13	Jn17	Jn5	My20	
<i>Petalostemon purpureum</i>		Jy2					Jy8
<i>Phlox hoodii</i>	Ap1-13	Ap1-My10		My11-Jn6	My13	Ap23-My19	
<i>Populus balsamifera</i>							
<i>P. tremuloides</i>							
<i>Potentilla anserina</i>		My20					
<i>P. concinna</i>		Ap20-My11		My11	My13	Ap13-My19	
<i>Prunus virginiana</i> var.		My20				My30	
<i>melanocarpa</i>							
<i>Pyrola asarifolia</i>							
<i>Ranunculus cymbalaria</i>		My20					
<i>R. rhomboideus</i>					My13		
<i>Ratibida columnifera</i>		Jn29-Jy2					
<i>Ribes oxyacanthoides</i>	Ap12	Ap25					
<i>Rosa acicularis</i>					Jn11-12		
<i>R. woodsii</i>		Jn8					
<i>Rubus pubescens</i>							
<i>R. strigosus</i>							
<i>Senecio canus</i>		My20					
<i>Shepherdia argentea</i>		Ap9-My4					
<i>S. canadensis</i>						My19	
<i>Sisyrinchium montanum</i>						My30	Jy8
<i>Smilacina stellata</i>			My13	Jn17		My19-26	
<i>Symphoricarpos occidentalis</i>		Jn21-Jy2					
<i>Thalictrum venulosum</i>						My20	
<i>Thermopsis rhombifolia</i>	Ap1-13	Ap7-My4	My1	My11	Jn5	Ap20-My10	My12-13
<i>Townsendia sericea</i>	Mr31-Ap13	Ap9-My10				Ap11-26	

Stavely Area	Carseland Area	Drumheller Area	Calgary Area	Longview Area	Seebe Area	Red Deer Area	Camrose Area	Edmonton Area	Glenevia Area
3500'	3100'	2300'	3500'	4500'	4200'	2800'	2400'	2200'	2200'
Jy6	My27-Jn3	Jn6 My20-21 My21	My28-Oc12 Jn2-Se29 My13-Jn10 My13-Jy7	Jn9-16 Jn9-16	Jn25 My27 My21-27			Jn18-19	
Jy6			Jn3-Jy27 Jn9-Jy4 Jn6-Jy27 Jy4-Se5	Jn9-16	Jn19 Jn17-26	Jn3 Jy20	Jn10	Jn4-8 My26-31 Jn5	Jn4-15 My19 Jn4-15
Jy13-Au9		Jy15 Jy15 Jy1	Jy3-Au8 Jy9-Se3			Jy12-13			
Au9			Jy10-Se6		Jn19	Jn1		My31	Jn13
Jy6	My19 My27	My12-18 My15-21	My13-Jy4 Jn11-Jy27 Jn16-Jy10 My15-Jn10 Jy3-17	Jn9-16 Jn16 Jn9-16	My21 Jn17 My27				
My1 My6	Ap14-Jn3	Ap19-My12 My5-12 Jn15 My5-21	Ap8-Jy9 My1-13 Mr24-My13 My29-Au18 Ap7-Se8	Jn9-16 Jn9-16	My16 My8-15 Ap10-My14 My6-21	Ap25 Ap22 My27	Ap17-26 My13	Ap10-15 Jn9	Ap27 Ap3
My1	My27-Jn3	My25 Jn3 My12 Jy20	My27-Jn10 Jn5-Jy27 My31-Jy4 Ap20-Jn2	Jn16 Jn16	Jn5 Jn7-26	My27 Jy6 My27 My1-23 Au15	My20 My16 My13	My23 Jn19-23 My14 My17	My30 Jn17-18 My28 My17
Jy6		My5-13 Jn15	My1-14 Jn5-Jy27 Jn4-Se20 My29-Jn6 Jn5-Jy27	Jn9-16 Jn9-16 Jn9-16	My14 Jn19-26	My27 Jn20 Jn6	Jn4	My16 Jn9 My22 Jn9-19	My15 Jn4-7 My19 Jn13
	My6 My19-Jn3	Jn14 My5-12 My5-12 Jn3-17 My15	Jn4-30 Ap23-My8 Ap18-My13 My28-Jn18 My14-Jn17	Jn9-16 Jn16 Jn9-16 Jn9-16	My21 My8 My21-27	Jy3 My27-Jn4	Jn7 My27	Jn6 My20-25	Ap20-My6 My30-Jn7
Au9	Jn3	Jy21 My5-Jn3 My5-12	Jn6-Au14 My17-Jn10 My1-Jy9	Jn9-16	My27	Jn3 My16-27	My13-27		My21 Jn3

	Writing-on-Stone Prov. Park	Lethbridge Area	Medecine Hat	Mountain View Area	Elkwater	Lundbreck Area	South end of Porcupine Hills
Elevation	3100'	3050'	2200'	4400	4100'	4200'	4300'
<i>Tragopogon dubius</i>		My27				Jn3	
<i>Urtica gracilis</i>							
<i>Viburnum edule</i>							
<i>Vicia americana</i>		My20-27	My23	Jn17		Jn12	
<i>V. sparsifolia</i>							
<i>Viola adunca</i>		My20		My11	My13-Jn11	My12	
<i>V. nephrophila</i>						My9	
<i>V. nuttallii</i>		Ap20-My10		My11-Jn5	My13-Jn2		My13
<i>V. rugulosa</i>				Jn17	Jn5-12	My12	
<i>Zizia aptera</i>				Jn5		My19	
<i>Zygadenus elegans</i>							

burne, Morningside, Penhold, Rochon Sands Provincial Park; (15) Camrose - Bittern Lake, Tofield; (16) Edmonton - Elk Island National Park, Gibbons, Opal, Stony Plain; and (17) Glenevis - Barrhead, Gunn, Mayerthorpe, Onoway. In the future it is hoped that additional reporting areas can be set up for such regions as Peace River, Wainwright, Lac La Biche, Fort MacMurray and Wood Buffalo National Park. They have not been included here due to either a lack, or a paucity, of observations.

It is evident from the data in the Table that flowering progressed, in general, in the order of the areas. This is in agreement with Hopkin's Bioclimatic Law which states, in part, that "other conditions being equal, the variation in the time of occurrence of a given periodical event in life activity in temperate North America is at the general average rate of 4 days for each degree of latitude and 400 feet of altitude, later northward, and upward in the spring and early summer, and the reverse in late summer and fall." The application of Hopkin's Law to our reporting areas means that flowering dates in the spring should be later as one goes northwards and upwards. The first flowering would be expected at Writing-on-Stone Provincial Park; Lethbridge should be 2 days later, Calgary 7 days later, Red Deer 12 days later, Edmonton 16 days later, and Peace River 23 days later. While it is tempting to apply this line of reasoning to the 1973 data, it should be remembered that most plants had more extended flowering periods than those indicated; it being possible to include only those dates that were reported; and climatic patterns varied considerably during the 1973 growing period with the result that at a given time weather in the north either held up or sped up flowering over what happened farther south, and vice versa at other times.

Stavely Area	Carsland Area	Drumheller Area	Calgary Area	Longview Area	Seabe Area	Red Deer Area	Camrose Area	Edmonton Area	Glenevis Area
3500'	3100'	2300'	3500'	4500'	4200'	2800'	2400'	2200'	2200'
	Jn3		Jn7-0c8 Jn13-Au1 Jn6 My31-Jy27 My18-Jy4	Jn16 Jn9-16 Jn9-16	Jn13-28	Au1 Jn3		My24-25 Jn9	My22 Jn13
	Jn3	Jn3					My27		
My6	Jn3	My5-20	Ap15-Jn6 My13-Jn17 My2-18	Jn9-16	My8-21 Jn19	My5-23 Jn8	My16-20	My22	Ap27
Jy6	Jn3	My7-30 My15-18 My21	My12-Jy27 My23-Jy4 My28-Jy27	Jn9-16 Jn9-16	My27	My18-Jn4		My19 Jn19	My19 Jn3

Each year is different and, in this regard, it is interesting to consider that whereas Aspen (Populus tremuloides) was seen in full flower in Edmonton from April 10-15 in 1973, long term records compiled by E.H. Moss (Canadian Field-Naturalist 74: 113-118) reveal a range, over 32 years, of April 11 to May 15. Another comparison can be made with the Prairie Crocus (Anemone patens var. wolfgangiana) which was seen in flower in the Lethbridge area from March 24 to May 12 and which should flower at about the same time in Swift Current where 13 years of observations (Jour. Wildlife Management 12: 127-132) revealed a range from April 6 to June 9. Both of these indicate that at those places, and at those times in the spring of 1973, flowering was more advanced than in any year on record. Observations made on other plants, and in other areas, indicate that, in general, phenological spring came much earlier than usual in 1973. A period of cold weather then set things back so that by early summer the reported flowering dates were close to normal.

The success of this project depends upon your observations and it is a pleasure to acknowledge the following individuals who filled in forms: B. Askew, Leita Askew, C.B. Bailey, Mrs. C.B. Bailey, M. Battrum, Myrtle Biggs, Mrs. W.B. Blocksidge, W.B. Blocksidge, Anna Cairns, Jean Cammaert, J. Cammaert, Evangeline Case, J.W. Case, Ellen Cooley, Barbara Danielson, Daphne Denton, S. Denton, Joy Finlay, Alison Fisher, Josephine Forbes, I. Giles, B.J. Godwin, Pamela Grigg, Elizabeth Hall, R. Hall, Beryl Hallworth, Aileen Harmon, Helen Harris, P. Hills, G. Horspool, Grace Horspool, Julia Hrapko, Joyce Junter, J.D. Johnson, Ruth Jones, R. Kalgutkar, G. Kerr, N. Kondla, Virginia Lang, Hon. Dr. J.W. Grant MacEwan, W.G. McKay, Nannette McKay, K. MacLennan, Lilian MacLennan, Jeannette Manry, Penny Maret, A.H. Marsh, Eileen Matthews, Jacqueline

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If you can help in 1974 by making observations in your area, or if you know of someone who could, please let me know so that I can send along some forms. The forms used during 1973 were paid for by the National Research Council of Canada, through my Operating Grant, and to whom my thanks are extended. My address is: The Herbarium, Department of Biology, University of Calgary, Calgary, Alberta.

NATURALISTS' BOOKSHELF (6):
THE NEW CANADIAN BIRD BOOK - SIXTY YEARS OLD

by Virginia Lang

I recently ran across a copy of The New Canadian Bird Book, by William Thomas MacClement, published in 1915 by Dominion Book Company, Toronto. The frontspiece says "Concise Sketches of Canadian Birds for Canadian Schools". In the preface, the author writes "The need for such a book has become very evident of recent years, because of the greatly increasing interest in the objects of nature. This interest is largely due to the wise encouragement given to observational studies in our schools. The birds, insects and plants make an irresistible appeal to fresh young minds, and to satisfy the natural desire to know the name, the relationship, the food, the breeding habits, and the range of our Canadian birds this book has been prepared."

Of particular interest to me were the accounts of now rare or endangered species, and accounts containing misinformation reflective of the state of ornithological knowledge at that point in time. Following are selected excerpts:

Of the Eskimo Curlew, MacClement writes ". . . Its range in Canada is chiefly on the eastern coast, breeding on the level grounds toward the Arctic. It was formerly plentiful on the Labrador and Newfoundland coasts and is still frequently seen there. In Ontario it is now rare. In September, 1881, the writer collected

several curlews on Wolfe Island, probably of this species, but they were not identified because of lack of definite description. They associated with the Golden Plover."

Referring to the Order Columbae, Pigeons and Doves, he writes " . . . Of this very numerous race, one form of which swarmed in parts of Canada within fifty years, we have at present only two and possibly only one representative. . .

. . . The passenger pigeon is not at this date, 1914 -- certainly known to exist in Canada, although it is possible that some still nest in the Lake of the Woods region . . . Unless a few pairs survive in the Lake of the Woods region, it is probable that at present the species is extinct, and no completely satisfactory reason for this can be given, although their fearlessness and their habit of nesting in colonies gave opportunity for their easy and wholesale capture and destruction.

When a boy, the writer had a young Passenger Pigeon as a pet, and it showed great capacity for affection and confidence. They nested in considerable numbers in the hardwood groves in our district, and this bird had been taken from the nest before it was able to fly. . . Altogether a more delightful pet could scarcely be found."

Of hawks and eagles, " . . . We have in Canada twenty-two hawks and eagles. Of all these only two are to be considered as deserving discouragement. These are Cooper's Hawk and the Sharpshin. Careful study by the Department of Agriculture of the United States, has completely proved the surprising fact that all the others do at least as much good as harm, and that most of the large hawks are among the friends of the farmer and gardener. The quantities of vermin they destroy are directly proportional to their activity and size. Our traditional hostility toward the 'hen hawk' must be reserved for the small, fierce and persevering pirates above mentioned."

Speaking of the Duck Hawk (Peregrine Falcon) he writes "In southern Ontario we see this beautiful and spirited hawk only in the fall, but it breeds in northern Ontario, as well as Quebec and the maritime provinces. It is common about Hudson Bay, and nests regularly in Manitoba and northwestward to Edmonton and Alaska. In British Columbia it seems more plentiful inland than on the coast. . ."

The Cardinal Grosbeak (Cardinal), writes MacClement, is " . . . Common in Kentucky and Ohio, and occasionally crosses to Ontario, where it may nest, but where at present it must be considered only a casual visitor. . ."

Of the House Sparrow, he says "This European bird was brought into the United States first about 1850. . . In Canada it has reached nearly to the Rockies, and will soon be in every town and village."

Referring to Kirtland's Warbler, "We have only one record of this Warbler in Canada and this comes from Toronto. . . Its nest and eggs are as yet unknown. . ."

MacClement writes of the Connecticut Warbler, "This bird is rarely seen in Ontario, but is a common summer resident of Manitoba. Otherwise we have no records of it in Canada. . ."

CENSUS OF FIVE GREAT BLUE HERON COLONIES IN SOUTHERN ALBERTA,
WITH A DISCUSSION OF METHODS

by Bill Lang

During a 1972 Calgary Field Naturalists' Society field trip, members encountered three teen-aged boys indiscriminately shooting near the Great Blue Heronry at Carseland, Alberta. Though the boys were quickly persuaded to limit their targets, members of the Society were faced with the realization that their powers were limited and that greater protection of the area was needed. Landowners of the area were contacted and eventually an arrangement of posting no trespassing signs and granting power of attorney to CFNS members to prosecute trespassers was obtained.

This incident was discussed at a Bird Study Group meeting (a committee of CFNS) and Jim Minty, Virginia Lang and I agreed to undertake the examination and census of the Carseland and other heronries in the Calgary area. We had two basic purposes: (1) to produce some useful data on the status of each heronry by some method that would involve only infrequent visits, and (2) to examine the present level of protection for each colony and make recommendations.

Rationale

Recent studies of the breeding biology of the Great Blue Heron have been conducted by Vermeer (1969), Pratt (1970, 1971), Henny and Bethers (1971), and McAloney (1973). These studies provide the following measures of success: (1) percent of successful nests; (2) number of young fledged per nesting pair; and (3) number of young fledged per successful nest. The first two measures rely upon a determination of the number of clutches initiated by actual examination of the nests, while the third measure is determined by the number of fledged young per nest containing young.

Vermeer (1969) indicates that the majority of Great Blue Heron

clutches at Dowling Lake, Alberta, were initiated from April 26 to May 10 in 1968. Thus, a good approximation of the number of clutches that would be initiated could be obtained by a single inspection of heron nests anytime after mid-May.

Great care must be taken in visiting a Great Blue Heron colony, especially during clutch initiation, incubation and early rearing periods. Crows, magpies and gulls, presumably the major predators of Great Blue Heron eggs and young in Alberta, would take advantage of any disturbance in a heronry during these periods. After the young have gained in size, they are probably relatively safe from predation. McVaughn (1972) indicates that a considerable period of gradual habituation to an observer's presence is required to minimize disturbance at a mixed-species heronry. We did not have the time to directly determine the number of clutches initiated or meet the gradual habituation recommendation. Moreover, direct access to the High River and Fish Creek colonies could not be obtained.

Male Great Blue Herons choose and defend their nest sites and attract a female to the site (Cottrille and Cottrille, 1958). Once the herons are paired, interactions within the colony will create a pairs-about-a-nest configuration. Thus, a single census of occupied nests early in the breeding season would provide a measure of the number of pairs of herons attempting to nest. The number of pairs of herons attempting to nest may be substituted for the number of clutches initiated though the former may include immature or unmated birds sitting near nests that were not used or birds paired and defending territory which did not initiate clutches.

Henny and Bethers (1971) indicate that most of the young in an Oregon heronry were "branchers" (able to climb out of the nest onto the tree limbs) some twenty days after they had hatched. The researchers felt that "the number of young observed per nest at this [time] closely represents the number of young fledged per nest" (Henny and Bethers, 1971: 206). Thus, it seems that a count of young from a single visit to a heronry at a time when the majority of young are at the branching stage could produce a realistic measure of the number of fledged young.

By combining the results from the two censuses the measures of success reported in other studies can be obtained: (1) Percent of successful nests can be obtained by dividing the number of nests containing at least one young (second census) by the number of occupied nests (first census); (2) By dividing the total number of fledged young (second census) by the number of occupied nests (first census), the number of young fledged per nesting pair can be obtained; and (3) The number of young fledged per successful nest may be obtained by dividing the number of fledged young by the number of nests containing young, both figures determined on the second census.

Methods and Recommendations for Future Studies

Heronries in the present study were first examined on May 5 and 6, 1973. On these dates, colonies were essentially in a "pairs-about-a-nest" situation. In any further study, however, a slightly later date of first observation would be preferable to lessen the possibility of counting birds which did not initiate clutches.

All heronries were revisited on July 10, 1973, except the Bottrell heronry which was examined on July 5. Many of the young were well-feathered and many were branchers on these dates. Vermeer (1969) indicates that for the Dowling Lake colony the mean incubation period was 26.7 days and the mean age at first flight was 52.6 days. The summation of the incubation and first flight age totals 79 days whereas only 62 days elapsed between our first and second visits. Thus, it seems unlikely that any of the young had left the colony by the date of our second observation. It is possible, however, that we did count young which would not fledge. A third visit to heronries toward the first of August would appear adviseable in any future study.

Colonies were examined by telescope on the first visit. Field maps were made at this time. Originally, we had planned to use a mirror affixed to a long extendible pole to count young on a second visit. This devise proved unworkable. The Fish Creek and High River colonies were re-examined by telescope and, fortunately, they remained relatively visible by this means. Much to our surprise, a walk through the Okotoks colony proved that we had missed many of the nests on our first visit. Though the Bottrell heronry was somewhat difficult to view through the telescope, we were able to walk through the colony on our second visit. Upon revisiting the Carseland heronry, we discovered that the vegetation had increased to such an extent that we had great difficulty relocating nests. Others attempting this procedure would be well advised to mark as many nests or nesting trees as possible before the herons return. This may make it unnecessary to enter the colony at all.

Examining heronries by telescope or binoculars from the ground will produce a less-accurate picture of heron status than that obtained by actual examination of the nests. The direction and extent of the resulting bias will vary with the viewing conditions in each colony. In general, however, as vegetation will increase between the first and second visits and adult herons are more conspicuous than the young, methods used in this study will tend to underestimate the number of fledged young and, consequently, breeding success. The recommendations for a third visit to a heronry - in this case, as a check of the results of the second visit - and the marking of nests or nesting trees should help keep biases introduced by the viewing methods to a minimum.

TABLE I. Number of nests per colony.

	First Visit	Second Visit	On Ground	Not Accounted For
Bottrell	46	37	7	2
Carseland	39	25	3	11
Fish Creek	29	25	*	4
High River	25	27	*	2
Okotoks	7	17	0	10
TOTALS	146	131	10	19

* not examined.

Results

Table I shows (1) the number of nests observed in each visit; (2) nests that fell to the ground in 1973 for the accessible colonies; and (3) nests not accounted for. All nests in a colony were counted regardless of their condition. Nests determined to have fallen during the 1973 breeding season were readily distinguished from nests which had been on the ground over one or more winters. The wind storms of late May, 1973, may help explain the seven fallen nests at Bottrell, the most exposed colony. Four nests at the Carseland heronry were occupied by Canada Geese on our first visit. The high number of nests which could not be accounted for is reflective of difficulties noted earlier.

Table II presents the data relating to nesting success. The data from the Okotoks heronry is based upon the five nests observed on the first visit. Henny and Bethers (1971), Pratt (1970) and McAloney (1973) found that the percent of pairs successful in raising at least one young was 78%, 76-82% and 81%, respectively. The average success in the present study was 86%. As the average clutch size is known to increase with increase in latitude (see Henny and Bethers, 1971, for a discussion) only Alberta data is comparable for number of young fledged per nesting pair and per successful nest. Vermeer (1969) found that the number of young fledged per nesting pair for 11 nests at Dowling Lake in 1968 was 2.3. The comparable figure for this study is 1.7. The mean fledgling

TABLE II. Nesting Success of Five Great Blue Heron Colonies in Southern Alberta.

	# of nests occupied on first visit	# of nests w/young on second visit	# of fledged young	% of successful nests	# yg. fledged per nesting pair	# yg. fledged per successful nest
Bottrell	44	33	64	75%	1.4	1.9
Carseland	25	16	32	65%	1.3	2.0
Fish Creek*	24	22	57	100%	2.2	2.2
High River*	24	22	38	91%	1.6	1.7
Okotoks	5	12	24	100%**	2.0**	2.0
TOTALS	122	107	215	86%	1.7	2.0
*Examined by telescope on second visit.						
**Based on five nests observed on first visit and extrapolated to twelve nests.						

success per successful nest for 94 nests in Vermeer's study in 1967 was 2.5. The comparable figure for the present study is 2.0.

The low percentage of successful pairs and number of young fledged per nesting pair at the Carseland colony may be due to our failure to relocate some nests. A similar result at the Bottrell colony is partially due to the loss of seven nests. Nevertheless, it appears that though the pairs in the five southern Alberta heronries were fairly successful in raising at least one young, they did not do as well at raising multiple young. This may be clearly seen in Table III. This result may tend to indicate a shortage of food supply during the breeding season. If we assume that a 2.5 mean fledgling rate per pair is necessary to

TABLE III. Fledgling success per successful nest for 92 nests in 1967 (Vermeer, 1969) and 107 nests in 1973 (present study).

# of fledglings per nest	No. of nests in 1967	No. of nests in 1973
1	8	24
2	39	60
3	35	20
4	10	3

maintain a stable population (see Henny and Bethers, 1971), the colonies in this study may be declining. Further study is indicated.

Protection

As related above, satisfactory arrangements have been made for the Carseland heronry. The Bottrell and High River colonies are located on private property and actively protected by the owners. The Fish Creek heronry is located on land recently purchased by the Provincial Government and allocated by them to become a provincial park. Our recommendations for the protection of this heronry have been published in "Natural Areas 1973" (Bird, 1973). The Okotoks colony is located on the Sheep River several miles west of Okotoks. Access to the river about one-half mile from the colony is provided by a road to a Calgary Power pump station. There is no human habitation in the immediate area. Thus, the colony, if located, may be more subject to vandalism. Methods of protecting the colony should be examined.

Summary

The status of five Great Blue Heron colonies in southern Alberta was determined by a method which involved only two visits. The rationale for this procedure is outlined. Recommendations for future studies are provided. In this study, the mean number of fledglings per pair is 2.0 as compared with 2.5 for other Alberta heronries in 1967. This may mean that the heron colonies in the present study are declining. Further study is recommended. Protection for all the heronries except the Okotoks colony is presently satisfactory. Further protection for the Okotoks colony is recommended.

Acknowledgements

I want to thank Chip Weseloh and Harold Pinel for reading the original manuscript and making many helpful suggestions.

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OVERHEAD (37)

"An antelope has as much curiosity as a woman, they will travel miles and run themselves into all kinds of danger to find out what it was."

From: "The Prong-horned Antelope" by A.W. Mumford, in Birds and Nature, Vol. 8 No. 4, 1900.

(Liberated women and male chauvanists take note: Birds and Nature is an extinct journal.)

submitted by Martin McNicholl

GREAT GRAY OWLS FOR SALE IN ALBERTA

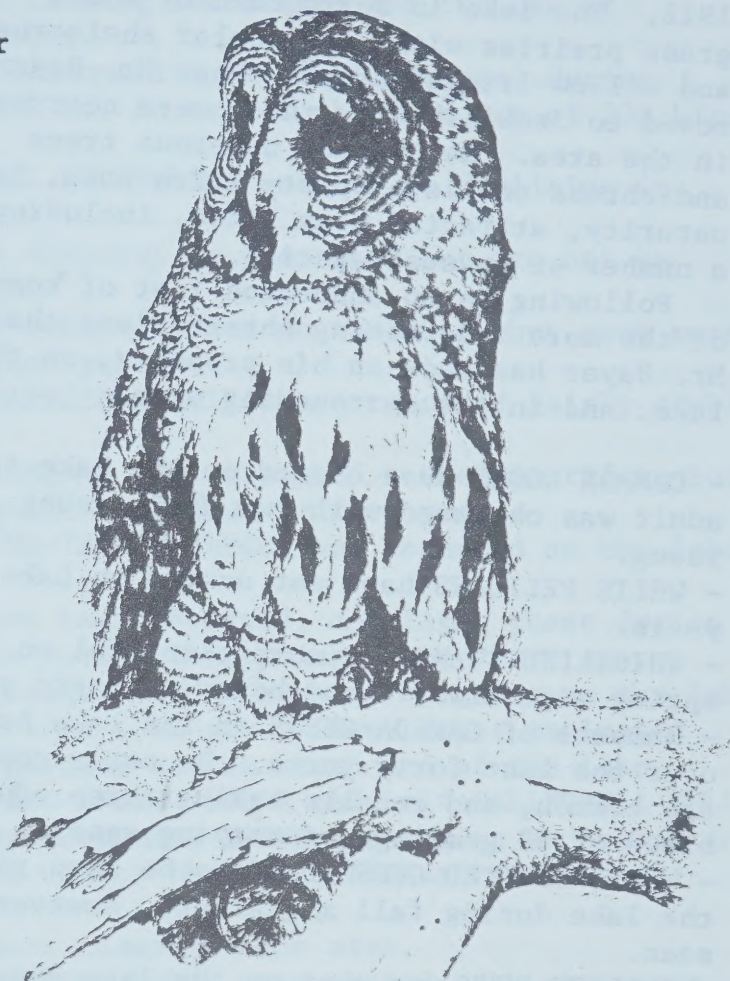
(Now that I've got your attention!)

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SOME BIRD RECORDS FROM LAKE NEWELL, ALBERTA

by Swen Bayer and Virginia Lang

Swen Bayer has lived on Jackfish Bay, Lake Newell, since the early 1930's. He has always had a keen interest and an observant eye for wildlife.

On July 18, 1973, I talked with Mr. Bayer about the birds he has observed in the Lake Newell area during the past forty years. As Mr. Bayer keeps no written records, some of the dates are not precise, and his records, despite his exceptional memory, cannot be substantiated using current criteria.

Lake Newell, about five miles southwest of Brooks, is a large

(25,000-acre) man-made reservoir, built in 1912. The lake is surrounded by short-grass prairies with some poplar shelterbelts and willow-fringed areas. When Mr. Bayer moved to Jackfish Bay, there were no trees in the area. He planted numerous trees and shrubs on his property which have, in maturity, attracted many birds, including a number of unusual species.

Following is an annotated list of some of the more interesting observations that Mr. Bayer has made on his property, on the lake, and in the surrounding area.



- COMMON LOONS have nested on the lake for many years. In 1972, an adult was observed with two downy young. In 1973 a pair raised one young.
- WHITE PELICANS have not nested on Lake Newell for seven or eight years.
- WHISTLING SWANS are more plentiful on the lake, particularly during spring migration, than they were forty years ago.
- Numbers of CANADA GEESE on the lake have remained fairly stable over the last forty years. He notes combined broods of 20-25 goslings are common, and recalls seeing three adults accompanying a combined brood of 82 goslings of varying ages.
- WHITE-FRONTED GEESE used to be seen regularly in good numbers on the lake during fall migration. However, recently they are seldom seen.
- A BLACK DUCK was shot on the lake many years ago.
- About thirty years ago a male OLDSQUAW was observed during spring migration.
- Except for the MARSH HAWK, all hawk species of the area seem to be decreasing in numbers. Mr. Bayer used to frequently see SHARP-SHINNED HAWKS during migration, but hasn't seen any for the past few years, except for a dead one washed up onto the beach during September of 1973. One OSPREY was observed over the lake 8-10 years ago, and another was seen during the spring of 1972. 20-25 years ago PEREGRINE FALCONS were fairly common in the area throughout the summer. Now they occur, in small numbers, during the fall only. SPARROW HAWKS used to be more common in the area than they are now. However, during the spring of 1972, more than usual were observed.
- In 1969 four SAGE GROUSE were observed on Mr. Bayer's property.
- Mr. Bayer has never seen any GREATER PRAIRIE CHICKENS in the area.

- RING-NECKED PHEASANTS are now declining throughout the area. Mr. Bayer suggests cleaner farming techniques and the use of herbicides as possible factors.
- SANDHILL CRANES occur occasionally, in small numbers, during the fall. The largest flock Mr. Bayer has observed was of 200 birds in 1961.
- SANDPIPERS AND OTHER SMALL SHOREBIRDS seem to be declining in numbers.
- COMMON SNIPES used to be abundant in the area, but are not as common in more recent years.
- LONG-BILLED CURLEWS have always nested in the area, but seem more plentiful now than in earlier years.
- Numbers of WILLETS and MARBLED GODWITS have remained fairly stable over the last 40 years.
- WILSON'S PHALAROPES nesting on the lake used to be plentiful, but seem to have declined over the last four or five years.
- In the early 1960's a LONG-TAILED JAEGER was observed on the lake during the fall.
- Two PARASITIC JAEGERs have been observed, one light phase during the fall and one dark phase during the spring, many years ago.
- If there have been any changes in the numbers of gulls on the lake, there are fewer than there were formerly. Dewey Soper estimated 10,000 white-headed gulls nesting at the south end of the lake, about half of which were RING-BILLED GULLS and half CALIFORNIA GULLS.
- There used to be a colony of COMMON TERNS nesting on an island in Jackfish Bay. However, one winter the ice build-up levelled the island.
- BLACK TERNS used to be more common in the area.
- Two to three pairs of MOURNING DOVES have nested each year ever since the trees on Mr. Bayer's property have matured.
- In 1961, a pair of BLACK-BILLED CUCKOOS nested in the raspberry bushes in the yard.
- Overall, SNOWY OWL numbers seem to be declining in the district. Some years ago, Mr. Bayer saw one kill three Gray Partridge in a snowdrift at one pounce.
- BURROWING OWLS used to be more common throughout the area. There were two traditional nest sites, now abandoned, on Mr. Bayer's property.
- LONG-EARED OWLS occasionally stop over during migration. In 1957 or 1958, on a rainy spring morning, at least 25 and perhaps as many as 50 were perched in trees on Mr. Bayer's property.
- SHORT-EARED OWLS' numbers have remained stable over the years.
- A number of years ago, during the summer, a SAW-WHET OWL was observed in the yard, perched in a poplar.

- During the summer of 1970 a pair of WESTERN KINGBIRDS took over a brood of EASTERN KINGBIRDS and raised them to fledgling. Over the last few years, WESTERNS have been more common than EASTERNS.
- SAY'S PHOEBES nested in an abandoned outdoor toilet every year until about 1961. Only one has been seen since then, during the spring of 1973.
- There seems to be fewer HORNED LARKS in the area during the summer than formerly.
- A colony of at least 200 CLIFF SWALLOWS nested under the garage eaves for six or seven years. In 1968 they quit nesting there, for no obvious reason.
- Numbers of BLACK-BILLED MAGPIES in the district have remained stable over the years.
- There seems to be fewer COMMON CROWS than there used to be in the area.
- In August of 1969 a CLARK'S NUTCRACKER was observed in Brooks.
- During the fall of 1973, a BLUE JAY frequented the property for a few days.
- In 1942 MOCKINGBIRDS nested in Brooks. A pair nested at Jackfish Bay seven or eight years ago.
- TOWNSEND'S SOLITAIRES used to be regular migrants, particularly in the fall, but none have been seen since Mr. Bayer removed his late black currant shrubs.
- During 1973 wintering BOHEMIAN WAXWINGS remained in the area until June.
- WESTERN MEADOWLARKS may be decreasing a bit; there don't seem to be as many in the area as in earlier years.
- During the spring of 1973 EVENING GROSBEAKS remained in the area until late May, feeding on old crabapples under a tree which was already in bloom.
- Mr. Bayer observed a DICKCISSEL during the early summer of 1972 about twenty-five miles east of Brooks.
- SAVANNAH and VESPER SPARROW numbers have remained stable over the years.
- Numbers of SNOW BUNTINGS seem to be declining in the area.

HIGHLIGHTS OF FALL, 1973, BIRD MIGRATION

PART I: SOUTHERN ALBERTA, by Chip Weseloh

During fall migration Western Grebes moved through the prairies in good numbers. There were 800 reported from Lake McGregor on Sept. 21 and 50 on Bruce Lake, east of Calgary, on Oct. 8. 500 Double-crested Cormorants were reported from Lake Newell during the

second week of September. 28 White-fronted Geese, not consistently reported this far west, were observed near Irricana on Sept. 28. 7 Hooded Merganser were seen in Calgary on Oct. 8, and a Surf Scoter and 6 Ruddy Ducks were seen just before freeze-up near Irricana on Oct. 28. 46 Sandhill Cranes were reported near High River on Sept. 16. During the month of September an unusually high total of 31 Stilt Sandpipers were reported from various locations between Calgary and Strathmore. Although in most years Common Snipe are observed well into December, the last report of this species was on Nov. 17. A single American Avocet was still lingering around Cheadle at the end of the first week of October.

Reports of a Parasitic Jaeger were received from Frank Lake and Calgary on Sept. 22 and 23, respectively. One Mew Gull was seen in Calgary on Nov. 11, six days after the last Ring-billed Gulls were reported. A report of a Sabine's Gull comes from Strathmore on Sept. 8 when one was differentiated from a flock of Franklin's Gulls.

Hawk Owls have made a welcomed appearance in the Calgary area in the last two years. This fall and early winter there were single reports on Oct. 12, Nov. 10, and Dec. 7 and 26 from Calgary, Water Valley and Priddis.

The first reports of Black-backed 3-toed Woodpeckers in the Calgary area since 1970 were made on Oct. 8 at Calgary and Oct. 21 at Seebe. Blue Jays were reported from Henderson Lake near Lethbridge on Nov. 24 and 25. Again this fall and early winter, Common Ravens are being reported regularly on the prairies bordering the foothills from Nanton north to Kathryn. The first Mountain Chickadee of the winter was reported in Calgary during the first two weeks of October. The first report in the CFNS files of a White-breasted Nuthatch from Banff was received, dated Nov. 21. Individuals of this species were also reported from Henderson Lake near Lethbridge on Nov. 24 and 25.

A Varied Thrush was reported from Carseland, east of Calgary, on Oct. 13, and the last Mountain Bluebirds were reported near Irricana on Oct. 7. One Black-throated Blue Warbler was reported in Calgary on Sept. 24. (This record will be considered by the A.O.R.C. There are no verified records of this species from within the Calgary area.)

The addition of the House Finch to the Calgary Check-List was made only last spring, but there has been another report, by the same observer who first reported it in Calgary. There was one House Finch frequenting the observer's feeder from Sept. 29 to Oct. 13. A Golden-crowned Sparrow, only the second report from within Calgary, was reported on Sept. 9. A McCown's Longspur, infrequently reported this far west, was seen at Frank Lake in mid-October.

1973 fall migration was marked by relatively few rarities and late-lingering bird species in southern Alberta. (Additional details of most of these observations can be found in the fall and early winter issues of The Calgary Field Naturalist.)

PART II: NORTHERN ALBERTA, compiled by Virginia Lang from The Edmonton Naturalist

At Lake Wabamun near Seba Beach ten Bald Eagles were observed at once sitting on the ice Nov. 9-11. There were two fall reports of Gyrfalcons, both of grey-phased birds, one at Bittern Lake on Oct. 28 and one near Islay on Nov. 5.

Two Buff-breasted Sandpipers were reported on Aug. 11, the only fall record for this species from the Edmonton area. Several shorebird species lingered much later than usual this fall. The last Willets were reported on Sept. 22. One Northern Phalarope was seen at Beaverhill Lake on Oct. 6-8. The last Ruddy Turnstone reported from the Edmonton area was one individual on Oct. 13. A Baird's Sandpiper was lingering at Beaverhill Lake as late as Oct. 20. 14 Greater Yellowlegs, 2 Lesser Yellowlegs, 3 Pectoral Sandpipers, and 1 Long-billed Dowitcher were reported from Beaverhill Lake on Oct. 27. The last Black-bellied Plover was reported Oct. 28 at Cooking Lake.

Four reports of Parasitic Jaegers were received, all from Beaverhill Lake, as follows: two dark-phased birds on Sept. 22; two on Sept. 26; 6 on Sept. 29; and 2 on Oct. 6. The report of six was a conservative estimate by the observer who saw individuals of this species on fifteen occasions during the day.

A very late Common Tern was reported near Jasper on the Athabasca River on Oct. 2.

An influx of Hawk Owls occurred this fall and winter. The more spectacular reports were: nine individuals along a 45-mile stretch of MacKenzie Highway between High Level and Paddle Prairie on Nov. 5; and six individuals along the road between Kinsella and Vegreville on Nov. 19, a distance of about 45 miles.

Several surprising reports of Northern and Black-backed 3-toed Woodpeckers were received from Edmonton and vicinity. A Clark's Nutcracker was reported from MacKinnon Ravine, Edmonton, Nov. 13.

One Townsend's Solitaire was reported at Oliver Lake east of New Serepta on Oct. 29. This may be the only fall report for this area, although they have been reported on a few occasions during spring migration. A Chestnut-sided Warbler was netted for banding near Jenner, Alberta, on Aug. 20.

A very early Common Redpoll was seen in Edmonton on Sept. 9. Although Harris' Sparrows are seldom reported during fall migration, two reports from Edmonton were received: two on Sept. 15; and one

frequenting a feeder Nov. 2-6.

Accidental or rare bird species were almost totally absent during the 1973 fall migration, although a number of late-lingering species were reported. (Additional details regarding the observations contained herein are available in fall and early winter issues of The Edmonton Naturalist.)

FAN NEWS, REPORTS, PROJECTS

MAY FIELD MEETING OF FAN

The spring field meeting will be held at Elkwater Lake in the Cypress Hills on the May 17-19 long week-end, hosted by Medicine Hat FAN members. The Director's meeting will be Saturday afternoon and evening. Field trips are planned for Sunday. Motel facilities are limited (one small motel, The Greentree Motel, at Elkwater), but there are several campgrounds in the immediate area.

HIGHLIGHTS OF FAN DIRECTOR'S MEETING

The Twelfth Regular Meeting of the Board of Directors of FAN was held on 9 February 1974 in Calgary. Following are highlights:

- John Powell, President, reported we had received a provincial grant of \$300.00 for promotion of a new club and of FAN.
- Chip Weseloh, a guest, introduced a proposal to set up a Provincial Bird Observatory, similar to the Long Point Bird Observatory in Ontario, for use as a banding station/educational facility. Alberta banders will be contacted regarding demonstrations to clubs, and the proposal will be discussed further at a later date.
- Dorothy Broadbent has organized a "kit" to be sent to new members in areas where clubs could be formed. This kit contains a letter outlining FAN's aims and activities, brochures, and other useful information.
- Director's voted that FAN go on record as opposing any phase-out of the provincial campgrounds and that the government increase its support of establishing and maintaining limited facility campgrounds at suitable locations throughout the province.
- Director's voted that in view of the widespread interest in massive development of oil extraction facilities in the Alberta Tar Sands and the paucity of knowledge on the impact of these large-scale surface mining ventures, we request all governmental departments concerned be instructed and supported with the necessary funds to investigate and report publicly on the environmental impact of present and proposed

tar sand extraction plants, on reclamation of mined areas, disposal of wastes, and water use.

MAY DAY COUNT - May 26, 1974, by Loran L. Goulden

Count Days, under various names (May Day Count, Big Day Count, Species Count Day) are an international excuse for getting people out in the field. Although bird counts are the rule, our May Day Count is open to botanical enthusiasts who wish to count flowering plants as well. (I suggest the team agree on what they will be counting before they start to avoid the "possibility" of conflict later in the day.) The purpose is to strive to see (or hear, in the case of birds) as many species as possible on a given day.

Some suggested rules:

- 1) Teams are made up of two or more persons* travelling in one car or other conveyance, maintaining conversational speaking distance with each other during all periods of observation.
- 2) Two-thirds of the team (2 out of 2, 2 out of 3, 3 out of 4, etc.) must see the bird or plant or, in the case of birds, recognize the bird's song in order to count the species.* Exchange tips with other people at chance meetings, lunch breaks, etc., are permitted, but a team must not utilize elaborate phone-in set-ups or team up or travel together with persons in another car (except briefly).
- 3) The count period is from dawn to dusk.* There are no geographical limitations other than within Alberta.
- 4) Count all recognized species. Include established exotics but no lone escapes. Count Rock Doves if reasonably feral, but not Mute Swans (unless truly feral) or semi-domestic ducks, etc; use common sense. Dead birds, hybrids and subspecies must not be counted, but should be mentioned in your report. Unidentified birds or plants which can be unmistakably recognized but cannot be identified specifically ("peeps", "accipiter", "Carex sedge", etc.) may be counted if no others in their families are counted. Put "sp." by the generic category of any such birds or plants which are counted on your check-list.
- 5) In the case of birds, use the Alberta Check-List of Birds (available free of charge from the Provincial Museum and Archives, 12845 - 102nd Avenue, Edmonton). Incorporate recent A.O.U. changes.
- 6) Record numbers of observations of plants in flower at least up to 25, and numbers of birds at least up to 25 of each species. Note locations of observations, as well.

* Adjustments from American Birding Association's rules made by the Editor.

A PROVINCIAL BIRD (8), by Martin K. McNicholl

The long saga of the joint FAN-Provincial Museum project to select an official Provincial Bird for Alberta will soon be over. From the lists of top choices by member clubs eight finalists are to be presented to school children and Joe Public for final voting. Information on the project and on each bird will be made available to all Alberta teachers, who will be asked to submit votes from their classes. An essay contest is planned for the schools in conjunction with the vote. A display at the Provincial Museum will also emphasize the project, and voting forms will be available for the interested public. News releases to local newspapers will further solicit votes from Alberta citizens. By June 30 we hope to be able to announce the Provincial Bird. The eight finalists are as follows:

Most votes:	Mountain Bluebird
Second (tie):	Red-winged Blackbird
	Black-capped Chickadee
Third (tie):	Western Meadowlark
	Great Horned Owl
Fourth (tie):	Prairie Falcon
	Gray Jay
	Black-billed Magpie

CLUB CORNER (6): PUBLIC EDUCATION

by Martin K. McNicholl

An ever-present problem of naturalist clubs is maintaining a large enough membership to effectively carry out the wide spectrum of activities desired. A somewhat related problem centres around educating the public to the wonders of the natural environment.

Two programs of the Edmonton Natural History Club are directed primarily at the general public. Both have been tremendously successful, attracting a wide range of people and, incidently, resulting in several new members.

The first consists of a series of evening classes co-sponsored by the Alberta Provincial Museum's natural history division and the club. In the 1972-73 winter classes were held on identification of Alberta birds and on plant appreciation. Both were popular, resulting in a repeat of these programs in 1973-74. Additional classes are being held on mammals, butterflies, and reptiles and amphibians. Several others may be held in the future, depending on the demand. Bird classes will surely be held next year, as the course was over-

subscribed this year.

Last June (1973) the club co-sponsored a series of nature walks with Edmonton's Parks and Recreation Department. These walks, too, attracted large numbers of people, resulting in their being continued to the end of October. The lovely boreal setting of Edmonton's Whitemud Park provided much of interest to the participants.

These programs succeeded in exposing many people to Alberta's natural history, and could well be repeated elsewhere.

CLUB NEWS

ALBERTA NATURAL HISTORY SOCIETY

The March 28 ANHS meeting features Mr. Dale Alsager, Department of Agriculture, discussing 1080 poison and other methods and policies of the Animal Pest Control Services.

The Society has set up an executive committee to study the proposed dam on the Red Deer River in the Red Deer area. The committee hopes to force consideration of the basic issues ("do we want extensive industrial development which the dam will encourage?") rather than the current superficial ones (argument over the exact location of the dam). We look forward to additional details in the next AN.

BOW VALLEY NATURALISTS

Bow Valley's spring program of meetings is: March 27, "Social Behavior of Mule Deer", movies and slides by Dr. Val Geist, U. of C. Faculty of Environmental Design; April 24, "Pacific Rim National Park", by Ross Dobson, Chief Park Naturalist, Banff National Park. Both will be held in the Banff Firehall at 8:00 PM.

BUFFALO LAKE NATURALISTS

At the Jan. 17 Annual Business Meeting the 1974 slate of officers was elected, coming field trips were discussed and Lloyd Lohr, President, gave his report for the first year of existence of the club. In the coming year, more extensive field trips incorporating individual activities (canoeing, horseback riding, photography, etc.) are planned, a nature trail in Rochan Sands Park is being considered, and it is hoped the club will be able to expand Hazel Rachar's Bluebird Trail. (Buffalo Lake's 'Club News' was received in the form of newspaper clippings. Could your club make more extensive use of local newspapers?)

CALGARY FIELD NATURALISTS' SOCIETY

The Natural Areas Committee's new 245-page publication "Natural Areas 1973", edited by C.D. Bird, is now available. The report includes major revisions of last year's report and data from five additional natural areas studied this year. Price: \$6.00 to CFNS members, \$7.00 to non-members, including mailing. (\$6.00 price available on all orders for ten or more copies). Send orders to CFNS, Box 981, Calgary.

Another successful season of Study Nights is coming to an end. The programs presented covered Bird Migration, Nature Photography, Animal Tracks and Signs, Mushrooms, Identifying Insects, and Arctic Flora and Fauna.

EDMONTON NATURAL HISTORY CLUB

ENHC's impressive educational programs (see "Club Corner", this issue) are, again this year, a success. For details of the spring courses contact the Information Officer, Provincial Museum and Archives of Alberta, Edmonton (452-2150).

Other upcoming events include a night owling trip in late March-early April led by Bob Gehlert.

LETHBRIDGE NATURALISTS' SOCIETY, by Helen Schuler

During the past year, besides regular monthly programs, members have been participating in a wide range of activities. Some are involved in breeding bird surveys for the Canadian Wildlife Service. One very active member set up a nature trail in the Nature Preserve and wrote a self-guiding tour; another donated numbered posts for each stop. In December, Society members took part in the Department of Culture, Youth and Recreation's trails seminar. The LNS has set up a series of environmental awareness outings in connection with the public school's science curriculum (details will appear in the next issue of the AN).

Coming field trips are: April 28, 6-mile Coulee; May 18-20, Cypress Hills (FAN); May 26, Nature Preserve (May Day Count); June 9, Pothole Coulee; and June 23, Schultz's Farm. Anyone interested is welcome to attend. Contact Helen Schuler, 2630 22nd Ave. S. (327-1830).

NOTES AND NEWS

A PLEA FOR HELP WITH BUTTERFLIES, by C.D. Bird

A book is now being written on the butterflies and skippers of Alberta by John Legge, Charles Bird and Allan Legge. It is due for completion in three years and will be published by the Provincial Museum. The authors are now preparing dot maps of the distribution of each species and in this regard are studying many collections. If you have a collection, or know of someone who has, please write to myself, at the Department of Biology, University of Calgary, Calgary, Alberta.

INFORMATION ON BIRD FEEDERS REQUESTED

Regarding the request for information in Vol. 3 No. 4 about maintaining successful bird feeders in southern Alberta, the address to which you are requested to send data has been changed to: Dorothy Hazlett, #304, 629 Royal Avenue, Calgary. If you have (or know anyone who has) a successful bird feeder (Red Deer area and points south), please contact Dorothy.

NEW CAMPGROUND TO REPLACE OVERUSED AREA AT LAKE O'HARA

Lake O'Hara meadows in Yoho National Park are now closed to camping. A new campground about a half mile from the warden cabin will be ready for the 1974 summer season. Hikers and day users will still be able to use trails leading through the meadow for sightseeing and as a starting point for hikes to surrounding peaks. The new campground, located on the forest edge off the fire road, will have thirty sites which can accommodate approximately ninety people. A campsite permit system will be instituted and permits will be sold. This restriction has become necessary because of the large number of people camping in the meadow which has resulted in damage to the fragile alpine cover.

ANTI-LITTER WEEK

Anti-Litter Week, known last year as Littercheck, will be held May 6-12 throughout Alberta. Several activities are being planned by schools, community groups, municipalities and the provincial government. The aim of the week is to clean up trash and encourage people not to litter.

PROTECTION FOR PELICAN COLONY SOUGHT

Fort Smith, N.W.T. residents have aroused interest of federal, provincial and territorial legislators to protect Canada's northernmost pelican colony, which lies immediately west of Wood Buffalo National Park boundaries on the Slave River Rapids. The colony has more recently been endangered by human disturbance in the form of helicopters, shootings and casual visitors to the colony on motorcycles.

The Alberta Lands and Forests Department promised an on-the-spot biological survey and possible sanctuary boundaries inquiry and public hearings at Fort Smith in early 1974. The University of Alberta has a research proposal on the way to the Canadian Wildlife Service for data gathering along behavioral lines so that future regulations can fit in with colony life.

HARP SEAL HUNT PROTEST

The International Fund for Animal Welfare recently ran a newspaper plea for support regarding the Harp Seal Hunt. Readers were asked to fill out and mail a coupon (to the Prime Minister or to the IFAW, P.O. Box 1011-A, Fredericton, N.B.) which read "To the Prime Minister of Canada: I deeply protest the killing of Harp Seals by Norwegians and Canadians". Commercial seal hunting was banned in the Gulf of St. Lawrence in 1972, but continues on the Labrador Front with hunters of a Norwegian-dominated sealing industry involved.

SASKATCHEWAN GRASSLANDS PARK

The Resource Study Group, an affiliate of the Saskatoon Environmental Society, has published an 8-page tabloid entitled "The Prairie - A Last Refuge" supporting the establishment of a 535-square-mile grasslands park in the Val Marie-Killdeer area, southern Saskatchewan. Readers are asked to write letters of support to Premier Allan Blakeney, Legislative Building, Regina. The tabloid's mailing coupon simply reads "I support the proposal for a National Grasslands Park in Southern Saskatchewan and urge the governments of Canada and Saskatchewan to give this issue their immediate attention." Further information may be obtained from the Resource Study Group, Sub P.O. 6, Box 276, Saskatoon, Saskatchewan.

NATIONAL WILDLIFE WEEK, 1974: "Preservation of Wetland Habitat"

In 1974 National Wildlife Week in Canada will be observed during the week of April 8-13. The ecological and economical role of wetlands, and the importance of their preservation, will be keynoted.

OVERHEAD (38)

"Miss Donoghy's lawyer argues that prawns are neither animals nor fish, but insects, and therefore not covered by the 1912 Protection of Animals Act."

From: The Edmonton Journal, Jan. 12, 1974, regarding English Court Case about cruelty to prawns.

Submitted by D.A.E. Spalding

- - - - - CUT ALONG LINE - - - - -

Enclosed is a cheque in the amount of \$_____ covering
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ships (\$10.00) to The Federation of Alberta Naturalists.

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